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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,220	11/15/2001	Melvin Edwin Kamen	10554-089-999	4219
7590	05/04/2004		EXAMINER	
			SHOSHO, CALLIE E	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/002,220	KAMEN ET AL.
Examiner	Art Unit	
Callie E. Shosho	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 April 2004.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-36 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-36 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. All outstanding rejections except for those described below are overcome by applicants' amendment filed 4/14/04.

In light of the new grounds of rejection as set forth in paragraphs 2-3 below, the finality of the previous office action has been withdrawn and thus, the following action is non-final.

Double Patenting

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

3. Claim 31 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1 of prior U.S. Patent No. 6,093,455 (Kamen et al.). This is a double patenting rejection.

Claim 31 discloses a method for decorating a vitreous article comprising the steps of (a) applying to the vitreous article in a predetermined fashion a radiation curable ink composition

comprising free acid group which is (i) operable when cured to bond to the vitreous article and (ii) strippable from the vitreous article upon exposure to alkali, followed by, (b) curing the ink composition on the vitreous article by exposing it to the radiation by which it is curable, and thereafter, (c) heating the decorated vitreous article at a temperature until the ink composition is cured and fused on the vitreous article wherein the temperature is from 90⁰C to 200⁰C and the vitreous article is heated for a period of 0.5 to 30 minutes. Thus, claim 31 is identical to claim 1 of Kamen et al. It is noted that although present claim 31 discloses that the ink is cured and fused on the vitreous article and claim 1 of Kamen et al. disclose that the ink is bonded on the vitreous article, given that in both present claim 31 and that of Kamen et al. the ink is heated to identical temperature for identical time, it is clear that the bonding disclosed in claim 1 of Kamen et al. is identical to curing and fusing of present claim 31.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-28, 31, and 34 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for heating at temperatures of 90-200⁰C or 100-200⁰C, does not reasonably provide enablement for heating at any temperature. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Case law holds that applicant's specification must be "commensurately enabling [regarding the scope of the claims]" *Ex Parte Kung*, 17 USPQ2d 1545, 1547 (Bd. Pat. App. Inter. 1990). Otherwise **undue experimentation** would be involved in determining how to practice and use applicant's invention. The test for undue experimentation as to whether or not all compounds within the scope of claims 1-28, 31, and 34 can be used as claimed and whether claims 1-28, 31, and 34 meet the test is stated in *Ex parte Forman*, 230 USPQ 546, 547 (Bd. Pat. App. Inter. 1986) and *In re Wands*, 8 USPQ2d 1400, 1404 (Fed.Cir. 1988). Upon applying this test to claims 1-28, 31, and 34, it is believed that undue experimentation **would** be required because:

- (a) *The quantity of experimentation necessary* is **great** since claims 1-28, 31, and 34 read on any temperature such as 30 °C, 40 °C, 80 °C, 300 °C, 400 °C, etc.
- (b) There is **no direction or guidance presented** for heating the decorated vitreous article to any temperature.
- (c) There is an **absence of working examples** concerning heating the decorated vitreous article to any temperature.

In light of the above factors, it is seen that undue experimentation would be necessary to make and use the invention of claims 1-28, 31, and 34.

6. Claims 29, 31, 32, and 34 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The rejection is adequately set forth in paragraph 4 of the office action mailed 10/22/03 and is incorporated here by reference.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 21-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have amended claims 21 and 23 to recite “radiation curable ink”. Previously, the claims had recited “radiation cured ink”. Given that the claims are drawn to method for stripping decorative indicia comprising contacting glass substrate having decorative indicia thereon with an aqueous alkaline solution, it is not clear why the ink would be removed from the glass substrate before curing. Further, given that the decorative indicia is placed on the glass substrate using curing and fusing (as disclosed for instance in claim 1), it is not clear how the glass substrate has decorative indicia thereon without having been cured. Clarification is requested.

Response to Arguments

9. Applicants arguments filed 4/14/04 have been considered but they are not persuasive.

(a) *Response to arguments regarding 35 USC 112, 1st paragraph rejection –Enablement*

Applicants argue that contrary to examiner's position, the instant specification fully enables one of skill in the art to make and use the invention commensurate in scope with the claims without undue experimentation by using the teaching from the specification with information known in the field of decorating vitreous articles with radiation curable ink composition.

Specifically, with respect to the first *Wands* factor applied by the examiner in the office action mailed 10/22/03, applicants argue that the examiner has not made an enablement rejection over method as a whole given that the present claims require heating vitreous article at temperature until ink is cured and fused on the vitreous article (claim 1) or heating the glass substrate at first temperature to cure and fuse the ink composition on the glass substrate (claim 21) and thus, vitreous article is not heated at any temperature but a temperature that will cure and fuse the ink to the vitreous article.

However, while the present claims do require heating at temperature that will cure and fuse the ink, it is the examiner's position that this would still cause undue experimentation since the claims read on any temperature which will cure and fuse the ink, i.e. 205, 210, 300, 350, 400 °C, etc. Further, claim 1 discloses heating the decorated vitreous article to a temperature "until the ink composition is cured and fused on the vitreous article". While the cited phrase discloses how long the heat should be applied, i.e. until cured and fused, this does not provide guidance on what temperature the ink is heated.

Further, while applicants argue that the claims only read on those temperatures that would allow the ink to fully bond to the vitreous article and would exclude, for example, temperatures that damage the cured ink or decorated article, it is the examiner's position that given that the temperature at which ink would fully bond to the vitreous article as well as the temperature that would damage the ink or article depends on both the specific ink utilized, i.e. the types and amount of ingredients present in the ink, as well as the specific type of substrate utilized and given that the present claims do not explicitly disclose each and every ingredient that can be or that are present in the ink, given that the claims recite open language with respect to the ink, i.e. "containing", and given that there is no disclosure of specific type of vitreous article utilized (claim 1), it is the examiner's position that there would be undue experimentation to determine the temperature at which the ink would cure and fuse to the vitreous article.

Applicants argue that the approximate temperature that would be damaging to the post-UV cured ink can be determined by simple trial and error. However, given that the present claims read on any temperature that results in the ink being cured and fused to the article and given that such temperature depends on specific ink and article utilized, it is the examiner's position that the quantity of experimentation would be great since one skilled in the art would have to determine not only temperature which would cure and fuse the ink but also temperature that does not damage the ink or article.

Applicants argue that whole the heating step might require some experimentation, it does not require undue experimentation. However, applicants have not explained the difference between some experimentation and undue experimentation or why the experimentation in

determining the temperature at which the ink is cured and fused would only be considered “some” as opposed to “undue”.

With respect to the second *Wands* factor applied by the examiner in the office action mailed 10/22/03, applicants argue that the specification provides full and clear support for how to make the radiation curable ink, how to apply and cure the ink onto the vitreous article, and how to heat the decorated vitreous article until the radiation curable ink is cured and fused. With respect to this last heating step, applicants point to page 18, lines 3-7 of the present specification. It is agreed that this portion of the specification provides guidance for heating the decorated vitreous article given that page 18, lines 6-7 disclose heating at temperature of 90-200 °C, preferably, 100-200 °C, for a period of time of 0.5-30 minutes. But this does not provide direction or guidance for heating the decorated vitreous article at any temperature only at the disclosed temperature ranges and time. Applicants also argue that that the specification provides illustrative example, i.e. example 7, on how to apply radiation curable ink to a vitreous article, how to cure the ink on the vitreous article, and how to heat the decorated vitreous article until the ink is cured and fused. However, example 7 actually supports examiner’s position that the present claims are enabled for heating at temperature of 90-200 °C or 100-200 °C, but not for any temperature. It is agreed that example 7 does disclose guidance for heating the decorated vitreous article, but only at one temperature, i.e. 100 °C, which is already enabled. This example does not provide guidance for heating at any temperature.

Applicants argue that the examiner is incorrectly narrowly reading the instant specification given that the temperatures disclosed in the present specification are only preferred embodiments and are not meant to limit the temperature range that can be used in the present invention. However, it is believed that the examiner's reading is proper because these embodiments are the only disclosures in the specification which would enable one skilled in the art to choose temperature for heating decorated vitreous article.

With respect to the third *Wands* factor, applicants argue that the specification need not contain an example if the invention is otherwise disclosed in such a manner that one skilled in the art will be able to practice it without undue experimentation. However, it is the examiner's position that one is not able to practice the invention without undue experimentation and that while there is one example present in the specification which discloses heating at 100 °C, there are no other examples which provide heating at any temperature.

(b) *Response to arguments regarding 35 USC 112, 1st paragraph rejection –Written Description*

In response to the examiner's previous rejection of claims 29, 31, 32, and 34 (see paragraph 4 of the office action mailed 10/22/03) as failing to satisfy the written description requirement, applicants have now amended claims 29 and 32 to recite that the temperature is greater than 90 °C "and is sufficient to cure and fuse the ink composition to the glass substrate".

However, it is the examiner's position that this amendment does not overcome the rejection of record. While there is support in the present specification for the recitation that the decorated vitreous article is subjected to a temperature that is 90 to 200 °C or 100 to 200 °C, there is no support for the recitation of temperature that is "greater than 90 °C" which includes all temperatures above 90 °C. That is, the recitation of temperatures "greater than 90 °C" includes temperatures greater than 200 °C such as 210 °C, 250 °C, 300 °C, etc. for which there is no support in the present specification. The recitation that the temperature is sufficient to cure and fuse the ink does not provide support for the recitation of heating at any temperature above 90 °C. There is no support in the present specification for reciting that heating of the decorated vitreous article occurs at any temperature greater than 90 °C. As set forth in MPEP 2163 I, to satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. However, based on the instant specification, one of skill in the art would not conclude that the inventor has possession of claimed invention at any temperature greater than 90 °C but only for temperatures of 90-200 °C or 100-200 °C.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
4/29/04